

**Docket 81020TJS**  
**Customer No. 01333**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of

Richard A. Simon

METHOD OF ORGANIZING  
DIGITAL IMAGES ON A PAGE

Serial No. 09/559,478

Filed 27 April 2000

Group Art Unit: 2178  
Confirmation No. 1867  
Examiner: Kyle R. Stork

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Commissioner for Patents  
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Sir:

**APPEAL BRIEF PURSUANT TO 37 C.F.R. 41.37 and 35 U.S.C. 134**

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## **APPELLANT'S BRIEF ON APPEAL**

Appellant's hereby appeal to the Board of Patent Appeals and Interferences from the Examiner's Final Rejection of claims 1, 2 and 4-31 which was contained in the Office Action mailed January 24, 2006.

A timely Notice of Appeal was mailed on May 24, 2006.

### **Real Party In Interest**

As indicated above in the caption of the Brief, the Eastman Kodak Company is the real party in interest.

### **Related Appeals And Interferences**

No appeals or interferences are known which will directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

### **Status Of The Claims**

Claims 1, 2 and 4-31 are pending in the application. Claim 3 is cancelled.

Appendix I provides a clean, double spaced copy of the claims 1, 2 and 4-31 on appeal.

### **Status Of Amendments**

Preliminary amendment mailed March 29, 2001.

Office Action mailed September 17, 2003.

Amendment mailed November 14, 2003.

Final Office Action mailed February 5, 2004.

116 Amendment mailed April 5, 2004.

Advisory Action mailed May 3, 2004

Request for Continued Examination mailed May 7, 2004.

Office Action mailed June 17, 2004.

Amendment mailed August 24, 2004.

Final Office Action mailed January 27, 2005.

116 Amendment mailed March 28 2005.

Notice of Appeal mailed April 22, 2005.

Advisory Action mailed April 22, 2005.

Request for Continued Examination mailed May 4, 2005.

Rejection mailed August 8, 2005.  
Amendment mailed November 8, 2005.  
Final Office Action mailed January 24, 2006.  
116 Amendment mailed March 24, 2006.  
Advisory Action mailed May 4, 2006.  
Notice of Appeal mailed May 24, 2006.

### **Summary of Claimed Subject Matter**

With respect to independent claims 1 and 22, the Appellant's invention relates to a method and computer software product of organizing a plurality of digital images in a predetermined page format utilizing a software program running on a computer. *See* page 4, lines 29-32 and Fig. 1. In particular, the invention includes grouping a plurality of digital images into a plurality of different page layouts (*see* page 8, lines 14-32), each of the page layouts includes arranging said images to be nonoverlapping on a page layout, scaling said images to fit on the page layout (*See* page 6, lines 3-25; page 8, lines 3-21; page 9, lines 13-31), and determining an amount of white space on the page layout (*See* page 7, lines 3-14), wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed. *See* page 5, lines 9-10; Page 6, line 31 – page 7, line 2. The invention also includes selecting a page layout having a minimal amount of white space from said plurality of different page layouts. *See* page 7, line 27 – page 8, line 32 and Fig. 5.

With respect to independent claim 16, the Appellant's invention relates to a system for organizing a plurality of digital images in a predetermined format. *See* page 4, lines 29-32 and Fig. 1. In particular, the invention includes a computer for composing a plurality of digital images on a page. *See* page 4, line 29 - page 5, line 21 and Fig. 1, references 10, 12 and 64; page 8, lines 14-32. A software program such that when loaded on said computer will cause said computer to group said plurality of digital images into a plurality of different page layouts (*See* page 4, lines 29-32; page 6, lines 3-10), each of the page layouts including nonoverlapped images scaled to fit on the page layout (*See* page 6, lines

3-25; page 8, lines 3-21; page 9, lines 13-31), and white space (*See* page 7, lines 3-14), wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed. *See* page 5, lines 9-10; Page 6, line 31 – page 7, line 2. Also, the invention includes a computer readable code device configured to cause the computer to effect selecting a page layout having a minimal amount of white space from said plurality of different page layouts. *See* page 7, line 27 – page 8, line 32 and Fig. 5; *see also* page 4, line 29 - page 5, line 21 and Fig. 1, references 10, 12 and 64.

With respect to independent claim 23, the Appellant's invention relates to method of organizing a plurality of digital images in a predetermined page format utilizing a software program running on a computer. *See* page 4, lines 29-32 and Fig. 1. In particular, the invention includes providing a plurality of digital images selecting a number of said digital images for placement on said predetermined format, grouping a plurality of digital images into a plurality of different page layouts (*see* page 8, lines 14-32), each of the page layouts including arranging said images to be nonoverlapping on a page layout, scaling said images to fit on the page layout (*See* page 6, lines 3-25; page 8, lines 3-21; page 9, lines 13-31), and determining an amount of white space on the page layout (*See* page 7, lines 3-14), wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed. (*See* page 5, lines 9-10; Page 6, line 31 – page 7, line 2). The invention also includes normalizing said plurality of digital images that are to be placed on each of said different page layouts (*See* page 6, lines 20-22) and selecting a page layout having a minimal amount of white space from said plurality of different page layouts. *See* page 7, line 27 – page 8, line 32 and Fig. 5.

With respect to independent claim 24, the Appellant's invention relates to a method of organizing a plurality of digital images in a predetermined page format including an image void area utilizing a software program running on a computer. *See* page 4, lines 29-32 and Fig. 1. In particular, the invention includes identifying an area to be void of digital images. *See* page 11, line 27 – page 12, line 10. Grouping a plurality of digital images into a plurality of different page

layouts (*see* page 8, lines 14-32), each of the page layouts including arranging said images to be nonoverlapping on a page layout, scaling said images to fit on the page layout (*See* page 6, lines 3-25; page 8, lines 3-21; page 9, lines 13-31), and determining an amount of white space on the page layout (*See* page 7, lines 3-14), wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed (*See* page 5, lines 9-10; Page 6, line 31 – page 7, line 2), and selecting a page layout having a minimal amount of white space from said plurality of different page layouts .

With respect to independent claims 25 and 27, the Appellant's invention relates to method and computer software product of organizing a plurality of digital images in a predetermined page format including at least one digital image to be placed in a predetermined image location utilizing the software program running on a computer. In particular, the invention includes identifying said at least one digital image and the location of said at least one predetermined image location, grouping a plurality of digital images into a plurality of different page layouts, each of the page layouts including arranging said images to be nonoverlapping on a page layout, scaling said images to fit on the page layout, and determining an amount of white space on the page layout; wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed including said at least one image placed in said at least one predetermined image location. The invention also includes selecting a page layout having a minimal amount of white space from said plurality of different page layouts *See* page 7, line 27 – page 8, line 32 and Fig. 5.

### **Grounds of Rejection to be Reviewed on Appeal**

The following issues are presented for review by the Board of Patent Appeals and Interferences:

I. Whether the invention of claims 1-25 and 22-31 are patentable over Long et al. (US 2002/0095439) and further in view of Kuchta (US 5,805,777).

II. Whether the invention of claims 16-21 are patentable over Long et al. (US 2002/0095439) and further in view of Kuchta (US 5,805,777).

**Arguments**

**I. CLAIMS 1-25 AND 22-31 ARE PATENTABLE OVER LONG ET AL. AND FURTHER IN VIEW OF KUCHTA.**

**1. CLAIMS 1, 22, 23, 24, 25 AND 27 ARE PATENTABLE OVER LONG AND KUCHTA BECAUSE LONG AND KUCHTA, ALONE OR IN COMBINATION, FAIL TO SHOW ALL OF THE ELEMENTS RECITED IN CLAIMS 1, 22, 23, 24, 25 AND 27.**

**a. LONG AND KUCHTA DO NOT DISCLOSE, EXPRESSLY OR INHERENTLY, AT LEAST DETERMINING AN AMOUNT OF WHITE SPACE ON THE PAGE LAYOUT AS RECITED IN INDEPENDENT CLAIMS 1, 22, 23, 24, 25 AND 27.**

Long fails to teach or suggest at least determining an amount of white space on the page layout. Rather, Long discloses evening out unused space around an image in an attempt to balance white space above and below an image, i.e., a Vertical Space Distribution Rule. Long similarly discloses an attempt to balance white space to the left and right of an image, i.e., a Horizontal Space Distribution Rule. *Sew* [0047] and [0048]. The Vertical and Horizontal Space Distribution Rules merely attempt to distribute white space uniformly around an image 603, wherein the image is bounded in a white space well 602 within a page layout 601 (i.e., to center the image in a white space well). However, Long does not disclose determining an amount of white space on the page layout. In sharp contrast, Appellants' invention determines the amount of white space on the page layout to be used in selecting a page layout having a minimal amount of white space from said plurality of page layouts.

Kuchta fails to remedy the deficiencies of Long as Kuchta also fails to teach or suggest at least determining an amount of white space on the page layout. Rather, Kuchta merely discloses a printer control interface between a central

processor 12, such as a personal computer having software modules 32, 34, and a number of printers 14, 16, 18, and 20. *See* Col 3, lines 4-9. An information data structure (i.e., Table 9) is used to send job information to or receive job information from the modules 32, 34. *See* Col 10, lines 44-46. The features information data structure provides a scaleType, which is a bit assignment wherein each bit is used to designate a type of scaling requested for a print job by a host. When the bit designated as bit 2, Scale to Fit, is asserted, an image will be scaled to the maximum size that will fit in the printable area of the selected media without cropping the image or changing the aspect ratio. If the image is not the same aspect ratio of the printable area, some white space will be left in the printable area. *See* Col 12, lines 51-56. If bit 3, Scale to Fill, is asserted, the image will be scaled to the minimum size that will fill the printable area with the selected media, without leaving any white space or changing the aspect ratio. However, it is clear that Kuchta does not determine an amount of white space on the page layout.

Thus, Long and Kuchta do not teach, expressly or inherently, determining an amount of white space on the page layout. Therefore, Appellant respectfully submits that Appellant's claims are patentable over Long and Kuchta.

**b. LONG AND KUCHTA DO NOT DISCLOSE, EXPRESSLY OR INHERENTLY, AT LEAST SELECTING A PAGE LAYOUT HAVING A MINIMAL AMOUNT OF WHITE SPACE FROM SAID PLURALITY OF PAGE LAYOUTS AS RECITED IN INDEPENDENT CLAIMS 1, 22, 23, 24, 25 AND 27.**

Long fails to teach or suggest at least selecting a page layout having a minimal amount of white space from said plurality of page layouts as recited in Appellants' independent claims. As discussed above, Long discloses vertical and horizontal space distribution rules that attempt to uniformly distribute white space surrounding an image. *See* [0076]. Long uniformly distributes white space to optimize a cost function base on centering images in a white space well on a page layout. *See* [0078]. Further, Long discloses that images are initially placed upon



a page in accordance with a first predetermined layout pattern. The images are subsequently adjusted with reference to a number of rules. *See* [0096]. However, the rules in Long do not disclose, expressly or inherently, selecting a page layout having a minimal amount of white space from said plurality of page layouts. Moreover, Long does not disclose determining the amount of white space on the page layout to be used in selecting a page layout having a minimal amount of white space from said plurality of page layouts.

Kuchta fails to remedy the deficiencies of Long as Kuchta also fails to teach or suggest at least selecting a page layout having a minimal amount of white space from said plurality of page layouts. Rather, as discussed above, Kuchta is directed to a printer control interface for selecting a target printer on a network. *See* Col. 2, lines 19-29.

Thus, Long and Kuchta do not teach, expressly or inherently, selecting a page layout having a minimal amount of white space from said plurality of page layouts. Therefore, Appellant respectfully submits that Appellant's claims are patentable over Long and Kuchta.

**c. CLAIMS 1, 22, 23, 24, 25 AND 27 ARE  
PATENTABLE OVER LONG AND KUCHTA  
BECAUSE THE REFERENCES ARE NOT  
PROPERLY COMBINABLE.**

Appellant respectfully contends that a *prima facie* case of obviousness has not been established, as described more fully below. To establish a *prima facie* case of obviousness, three basic criteria must be met:

- 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
- 2) there must be a reasonable expectation of success; and
- 3) the prior art reference (or references when combined) must teach or suggest all the claim limitations.  
(M.P.E.P. §2142).

Appellant respectfully submits that the cited references do not teach or suggest all the claim limitations as discussed above.

Further, there must be some actual *motivation* to combine the references found in the references themselves, the knowledge of one of ordinary skill in the art or from the nature of the problem to be solved that would suggest the combination. Without a suggestion of the desirability of “the combination,” a combination of such references is made in hindsight, and the “range of sources available, however, does not diminish the requirement for actual evidence.” *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999). It is a requirement that actual evidence of a suggestion, teaching or motivation to combine prior art references be shown, and that this evidence be “clear and particular.” *Id.* Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

For example, it is respectfully submitted that Long fails to provide any suggestion to implement or otherwise be combined with a printer control interface as described in Kuchta. Moreover, Kuchta fails to provide any suggestion to implement or otherwise be combined with a method of arranging a plurality of images on a page in accordance with a predetermined layout pattern as described in Long.

Thus, Appellant respectfully contends that a *prima facie* case of obviousness has not been established as no “clear and particular” evidence of motivation to combine can be identified.

Further, in discussing a combination of Long and Kuchta, the Examiner states that it would have been obvious to combine Kuchta and Long “since it would have allowed a user to fit images to a page for printing without changing the image’s aspect ratio (Kuchta: column 12, lines 57-62).” However, the need to “allowed a user to fit images to a page for printing without changing the image’s aspect ratio” is what Kuchta teaches is the benefit of the Kuchta invention itself, and not a motivation to combine with Long. The Examiner must show some objective teaching leading to the combination. *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). It is respectfully submitted that there is no such objective teaching in at least Long that leads “to the combination” of Long with

Kuchta, and the Examiner has pieced together aspects purportedly found in the prior art to arrive at the invention through hindsight. As stated by the Federal Circuit:

“Combining prior art references without evidence of such a suggestion, teaching, or motivation simply **takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight.**”

*In re Dembiczak*, 50 USPQ2d 1614, (Fed. Cir. 1999) (citing *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985); emphasis added).

As such, there is no basis in the references themselves to motivate a person skilled in the art to combine at least the Long reference with the Kuchta reference.

#### **d. CONCLUSION**

Thus, it is submitted that further consideration of claim rejections under 35 USC 103(a) upon the citing of the third, fourth and fifth applied prior art references to Rzepkowski, Arledge and Bolnick is moot, inasmuch as the combination of Long, Kuchta, Rzepkowski, Arledge and Bolnick still lack any teaching, disclosure, or suggestion concerning determining an amount of white space on the page layout and selecting a page layout having a minimal amount of white space. Because claims 2, 4-15, 28-31 depend from claim 1, and claim 26 depends from claim 25, and include the features recited in the independent claims, Appellant respectfully submits that claims 2, 4-15, 25 and 28-31 are also patentably distinct over the cited references.

**II. CLAIMS 16-21 ARE PATENTABLE OVER LONG ET AL. AND FURTHER IN VIEW OF KUCHTA.**

**1. CLAIM 16 IS PATENTABLE OVER LONG AND KUCHTA BECAUSE LONG AND KUCHTA, ALONE OR IN COMBINATION, FAIL TO SHOW ALL OF THE ELEMENTS RECITED IN CLAIM 16.**

**a. LONG AND KUCHTA DO NOT DISCLOSE, EXPRESSLY OR INHERENTLY, AT LEAST SELECTING A PAGE LAYOUT HAVING A MINIMAL AMOUNT OF WHITE SPACE FROM SAID PLURALITY OF PAGE LAYOUTS AS RECITED IN INDEPENDENT CLAIM 16.**

Long fails to teach or suggest at least selecting a page layout having a minimal amount of white space from said plurality of page layouts as recited in Appellant's independent claims. As discussed above, Long discloses vertical and horizontal space distribution rules that attempt to uniformly distribute white space surrounding an image. *See* [0076]. Long uniformly distributes white space to optimize a cost function base on centering images in a white space well on a page layout. *See* [0078]. Further, Long discloses that images are initially placed upon a page in accordance with a first predetermined layout pattern. The images are subsequently adjusted with reference to a number of rules. *See* [0096]. However, the rules in Long do not disclose, expressly or inherently, selecting a page layout having a minimal amount of white space from said plurality of page layouts. Moreover, Long does not disclose selecting a page layout having a minimal amount of white space from said plurality of page layouts.

Kuchta fails to remedy the deficiencies of Long as Kuchta also fails to teach or suggest at least selecting a page layout having a minimal amount of white space from said plurality of page layouts. Rather, Kuchta merely discloses a printer control interface between a central processor 12, such as a personal computer having software modules 32, 34, and a number of printers 14, 16, 18, and 20. *See* Col 3, lines 4-9. An information data structure (i.e., Table 9) is used to send job information to or receive job information from the modules 32, 34.

See Col 10, lines 44-46. The features information data structure provides a scaleType, which is a bit assignment wherein each bit is used to designate a type of scaling requested for a print job by a host. When the bit designated as bit 2, Scale to Fit, is asserted, an image will be scaled to the maximum size that will fit in the printable area of the selected media without cropping the image or changing the aspect ratio. If the image is not the same aspect ratio of the printable area, some white space will be left in the printable area. See Col 12, lines 51-56. If bit 3, Scale to Fill, is asserted, the image will be scaled to the minimum size that will fill the printable area with the selected media, without leaving any white space or changing the aspect ratio. However, Kuchta does not select a page layout having a minimal amount of white space from said plurality of page layouts.

Thus, Long and Kuchta do not teach, expressly or inherently, selecting a page layout having a minimal amount of white space from said plurality of page layouts. Therefore, Appellant respectfully submits that Appellant's claims are patentable over Long and Kuchta.

**b. CLAIM 16 IS PATENTABLE OVER LONG AND KUCHTA BECAUSE THE REFERENCES ARE NOT PROPERLY COMBINABLE.**

Appellant respectfully contends that a *prima facie* case of obviousness has not been established, as described more fully below. To establish a *prima facie* case of obviousness, three basic criteria must be met:

- 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
- 2) there must be a reasonable expectation of success; and
- 3) the prior art reference (or references when combined) must teach or suggest all the claim limitations.  
(M.P.E.P. §2142).

Appellant respectfully submits that the cited references do not teach or suggest all the claim limitations as discussed above.

Further, there must be some actual *motivation* to combine the references found in the references themselves, the knowledge of one of ordinary skill in the art or from the nature of the problem to be solved that would suggest the combination. Without a suggestion of the desirability of “the combination,” a combination of such references is made in hindsight, and the “range of sources available, however, does not diminish the requirement for actual evidence.” *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999). It is a requirement that actual evidence of a suggestion, teaching or motivation to combine prior art references be shown, and that this evidence be “clear and particular.” *Id.* Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

For example, it is respectfully submitted that Long fails to provide any suggestion to implement or otherwise be combined with a printer control interface as described in Kuchta. Moreover, Kuchta fails to provide any suggestion to implement or otherwise be combined with a method of arranging a plurality of images on a page in accordance with a predetermined layout pattern as described in Long.

Thus, Appellant respectfully contends that a *prima facie* case of obviousness has not been established as no “clear and particular” evidence of motivation to combine can be identified.

Further, in discussing a combination of Long and Kuchta, the Examiner states that it would have been obvious to combine Kuchta and Long “since it would have allowed a user to fit images to a page for printing without changing the image’s aspect ratio (Kuchta: column 12, lines 57-62).” However, the need to “allowed a user to fit images to a page for printing without changing the image’s aspect ratio” is what Kuchta teaches is the benefit of the Kuchta invention itself, and not a motivation to combine with Long. The Examiner must show some objective teaching leading to the combination. *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). It is respectfully submitted that there is no such objective teaching in at least Long that leads “to the combination” of Long with Kuchta, and the Examiner has pieced together aspects purportedly found in the prior art to arrive at the invention through hindsight. As stated by the Federal Circuit:

“Combining prior art references without evidence of such a suggestion, teaching, or motivation simply **takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight.**”

*In re Dembiczak*, 50 USPQ2d 1614, (Fed. Cir. 1999) (citing *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985); emphasis added).

As such, there is no basis in the references themselves to motivate a person skilled in the art to combine at least the Long reference with the Kuchta reference.

### **c. CONCLUSION**

Thus, it is submitted that further consideration of claim rejections under 35 USC 103(a) upon the citing of the third, fourth and fifth applied prior art references to Rzepkowski, Arledge and Bolnick is moot, inasmuch as the combination of Long, Kuchta, Rzepkowski, Arledge and Bolnick still lack any teaching, disclosure, or suggestion concerning determining an amount of white space on the page layout and selecting a page layout having a minimal amount of white space. Because claims 17-21 depend from claim 16 and include the features recited in the independent claims, Appellant respectfully submits that claims 17-21, are also patentably distinct over the cited references. Nevertheless, Appellant is not conceding the correctness of the Office Action's rejection with respect to such dependent claims and reserve the right to make additional arguments if necessary.

### **Summary**

Therefore, Appellant respectfully submits that independent claims 1, 16, 22-25 and 27 are patentable over the cited references. Because claims 2, 4-15, 28-31 depend from claim 1, claims 17-21 depend from claim 16, and claim 26 depends from claim 25, include the features recited in the independent claims, Appellant respectfully submits that claims 2, 4-15, 17-21, 25 and 28-31 are also patentably distinct over the cited references.

## **Conclusion**

For the above reasons, Appellant respectfully requests that the Board of Patent Appeals and Interferences reverse the rejection by the Examiner and mandate the allowance of Claims 1, 2 and 4-31.

Respectfully submitted,

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### **Enclosures**

If the Examiner is unable to reach the Appellant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

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## **Appendix I - Claims on Appeal**

1. A method of organizing a plurality of digital images in a predetermined page format utilizing a software program running on a computer, comprising:
  - grouping a plurality of digital images into a plurality of different page layouts, each of the page layouts comprising:
    - arranging said images to be nonoverlapping on a page layout;
    - scaling said images to fit on the page layout; and
    - determining an amount of white space on the page layout;
  - wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed; and
  - selecting a page layout having a minimal amount of white space from said plurality of different page layouts.
2. The method according to claim 1 further comprising placing said plurality of digital images in said selected page layout.
4. The method according to claim 1 further comprising scoring each of said different page layouts.

5. The method according to claim 1 further comprising the step of further scaling the digital images of said selected page layout by different amounts.

6. The method according to claim 1 wherein the amount of white space is minimized by using stochastic algorithms.

7. The method according to claim 1 wherein said different page layouts includes placing images in a non-overlapping pattern.

8. The method according to claim 1 wherein said placing of said plurality of digital images in said different page layouts comprises scaling all of said images such that they fit within said page format.

9. The method according to claim 4 wherein said analyzing of said different page layouts comprises a iteration of comparing sequentially two different page layouts and selecting the best page layout until no further improvement in scoring is obtained.

10. The method according to claim 9 further comprising the step of scaling at least one of said plurality of digital images of the page layout obtained after said iteration.

11. The method according to claim 9 further comprising the step of rotating at least one of said plurality of said digital images a predetermined amount.

12. The method according to claim 8 wherein said scaling of said plurality of digital images comprises reducing the size of said plurality of digital images.

13. The method according to claim 1 further comprising the step of positioning said images in said selected page layout so as to provide a desired border on said page.

14. The method according to claim 12 wherein said white space is determined vertically between adjacent images in said page layouts.

15. The method according to claim 12 wherein said white space is determined horizontally between adjacent images in said page layouts.

16. A system for organizing a plurality of digital images in a predetermined format, comprising:

a computer for composing a plurality of digital images on a page;

a software program such that when loaded on said computer will cause said computer to group said plurality of digital images into a plurality of different page layouts, each of the page layouts comprising:

nonoverlapped images scaled to fit on the page layout; and  
white space;

wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed; and

a computer readable code device configured to cause the computer to effect selecting a page layout having a minimal amount of white space from said plurality of different page layouts.

17. The system according to claim 16, wherein said computer can be accessed remotely over a communication network.

18. The system according to claim 17, wherein said computer is accessed by a second computer.

19. The system according to claim 18, wherein said software program is run on said first computer.

20. The system according to claim 18, wherein said second computer is the personal computer of a customer.

21. The system according to claim 17, wherein said computer is accessed by a retail kiosk.

22. A computer software product for organizing a plurality of digital images in a predetermined format which when loaded into a computer causes the computer to perform the following steps:

grouping a plurality of digital images into a plurality of different page layouts, each of the page layouts comprising:

arranging said images to be nonoverlapping on a page layout;

scaling said images to fit on the page layout; and

determining an amount of white space on the page layout;

wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed; and

selecting a page layout having a minimal amount of white space from said plurality of different page layouts.

23. A method of organizing a plurality of digital images in a predetermined page format utilizing a software program running on a computer, comprising the steps of:

providing a plurality of digital images;

selecting a number of said digital images for placement on said predetermined format;

grouping a plurality of digital images into a plurality of different page layouts, each of the page layouts comprising:

arranging said images to be nonoverlapping on a page layout;

scaling said images to fit on the page layout; and

determining an amount of white space on the page layout;

wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed;

normalizing said plurality of digital images that are to be placed on each of said different page layouts; and

selecting a page layout having a minimal amount of white space from said plurality of different page layouts.

24. A method of organizing a plurality of digital images in a predetermined page format including an image void area utilizing a software program running on a computer, comprising the steps of:

identifying an area to be void of digital images;

grouping a plurality of digital images into a plurality of different page layouts, each of the page layouts comprising:

arranging said images to be nonoverlapping on a page layout;

scaling said images to fit on the page layout; and

determining an amount of white space on the page layout;

wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed; and

selecting a page layout having a minimal amount of white space from said plurality of different page layouts.

25. A method of organizing a plurality of digital images in a predetermined page format including at least one digital image to be placed in a predetermined image location utilizing the software program running on a computer, comprising the steps of:

identifying said at least one digital image and the location of said at least one predetermined image location;

grouping a plurality of digital images into a plurality of different page layouts, each of the page layouts comprising:

arranging said images to be nonoverlapping on a page layout;

scaling said images to fit on the page layout; and

determining an amount of white space on the page layout;

wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed including said at least one image placed in said at least one predetermined image location; and

selecting a page layout having a minimal amount of white space from said plurality of different page layouts.

26. The method according to claim 25 further comprising the step of permitting a user to request another page layout.

27. A computer software product for organizing a plurality of digital images in a predetermined format, said software program when loaded onto a computer causes the computer to perform the steps of:

identifying said at least one digital image and the location of said at least one predetermined image location;

grouping a plurality of digital images into a plurality of different page layouts, each of the page layouts comprising:

arranging said images to be nonoverlapping on a page layout;

scaling said images to fit on the page layout; and

determining an amount of white space on the page layout;

wherein any one of said plurality of images may be located in any position in said plurality of page layouts, each of said page layouts capable of being printed including said at least one image placed in said at least one predetermined image location; and

selecting a page layout having a minimal amount of white space from said plurality of different page layouts.

28. The method according to claim 1, wherein scaling said images further comprises scaling said image isotropically.



29. The method according to claim 1, wherein grouping the plurality of images further comprises resizing one or more of the plurality of images to be aesthetically balanced.

30. The method according to claim 1 further comprising randomly rotating an image or rotating the image in a predetermined pattern.

31. The method according to claim 1 further comprising spatially balancing the white space between said plurality of digital images.

## **Appendix II - Evidence**

None

### **Appendix III – Related Proceedings**

None